

# Implementation of E-Learning Model in Training on Learning Management System (LMS)

Prof. Dr. Rahmawati, M.Si. Ak<sup>1</sup> Prof. Dr. Bambang Sutopo, M.Si. Ak<sup>2</sup> Drs. Subekti Dj, M.Si, Ak<sup>3</sup>  
and Dr Mila Mumpuni, M.Si<sup>4</sup>

<sup>1,2,3</sup>Economics Faculty Sebelas Maret University, <sup>4</sup>BPPK Kementrian Keuangan RI  
<sup>1</sup>rahmaw2005@yahoo.com, <sup>4</sup>edelweis36@yahoo.com

## Abstract

Conventional training models cannot fully followed by all employees in government agencies. Budgeting will not be sufficient to finance the training with the conventional model as well as limitations on government training facilities. Currently, the use of information technology is no longer a new thing in education. With the limitations of the use of information technology in the classroom learning process and learning time become more flexible and effective without being limited by space and time. Change the time and place of study will change the learning that had been centered on the teacher to focus on training participants.

The use of information technology is considered important because it raises the efficiency of time and place of learning processes that become obstacles in the learning process in the conventional. E-Learning as a model of information technology- based training can be a solution to the limitations of conventional models. Training is implementing e-learning process can build LMS (Learning Management System) as a virtual classroom.

Learning material in the LMS can be a content-based multimedia or text-based content. In addition, LMS is preferably constructed with speed and convenience comparison with the beauty of the display of LMS. The qualities of LMS that can make the participants comfortable in digging for information and sharing of information's to the process of learning in the classroom.

**Keywords:** training, e-learning, learning material, Learning Management System (LMS)

## 1. Introduction

Conventional or traditional model still continue to dominate in learning. Conventional model has a learning environment with instructor-based classrooms, teachers, professors, or as an SME (Subject Matter Expert). Further Suo and Shi (2008: 191) states that "the traditional learning mode is still modalities of learning. Traditional learning has a classroom-based learning environment with an instructor such as a teacher, professor or subject-matter expert." Learning model in which the instructor as a center of knowledge, adjust the speed and direction of change in the context students in the classroom, while students are positioned in learning environment by listening to instructions.

Reece and Walker (1997: 132) states that "many students prefer often they say lectures because they are passive and few demands are made of them." This may imply that the conventional model is formed due to the attitude of students rely on the knowledge that will delivered by teachers to improve knowledge and skills.

Character of the participants in the conventional models tends to show a passive attitude in the classroom. This is in accordance with the opinion of Noe (2008:272) as follows: "The trains played a passive role in learning.

Communication on course content was one-way from the instructor to the learner." Passive attitude arises will depend entirely to the teachers in the fulfillment of knowledge, so that only one-way communication arises only from the faculty of the participants.

Goldstein & Ford (2003: 222) explains that the advantages of conventional training with the active process of interaction can be established between teacher and participant training. Education and training excellence in the conventional model by Wilson (2005: 92) is the "soft skills development or other skill requiring practice and face-to-face feedback are excellent choices for classroom training." This means that the difficulties in the delivery of content can be completed in class. Additionally supported by Hofmann (2006: 33) states that "some objectives may be best taught in a traditional classroom, like completing the lab technical work. Think of those kinesthetic That task-based objectives can result in disastrous outcomes when not performed well. "The purpose of learning the skills associated with the formation in the form of conventional or traditional models. However, the implementation is different when the concentration of training participants will have an effect because the participants are provided outside the main routine. While the downside is the heavy demands of the time is limited to the time schedule

of training, participants should be able to understand and practice the teaching materials.

Because after training that produces graduates who are skilled should tersimultan between classroom learning and the concept of class when it works later.

Bonk & Graham (2006: 5) further confirmed as follows that "the traditional face to face learning typically occurred in a teacher-directed environment with person to person interaction in a live synchronous, high-fidelity environment." This means that the conventional model or traditionally had the advantage because of the problems solved in the face to face in the classroom. The process of direct communication between participants or between participants and instructors not only establish the knowledge and skills but rather the establishment of a conducive environment.

## **2. Training**

Based on the constraints in the application of the conventional model, it is necessary to know the development of information technology in this global era in the field of education. In the field of education, information technology can be used as an alternative for implementing educational programs. Recently, information technology and its application have raised questions to think about learning processes that have been conventionally implemented so far (Knapp dan Glenn, 1996).

Therefore, the information technology shift in the field of education is the use of e-learning. E-learning is an educational system using electronic applications to support teaching and learning activities through the internet, computer networks, and computers (Romi SW, 2007). Meanwhile, distance learning is a system characterized by the communication between participants or users and instructors established by means of facilities such as television, telephones, computers, or radio (Goldsstein & Ford, 2003: 251).

The use of the e-learning method which gains popularity in the field of education has positive effects because: (1) this method is more effective and efficient; (2) it saves time, costs, and energy; and (3) it motivates learners to use technology. Besides positive effects, this method also has negative effects because it makes learners lazy, makes them away from books, and makes them less familiar with and respectful to teachers because of the lack of direct communication. Trainings for expenditure treasures make it possible to use information technology as an attempt to accelerate the availability of treasurer personnel but this depends on the decision makers. This means that trainings e-learning-based trainings for expenditure treasures can be only a dream or can be a solution for government offices.

Education and trainings in government organizations are regulated in Government Regulations Number 101 Year 2000 regarding In-Service Education and Trainings for Civil Servants, organizing the same thing that education and trainings refer to teaching and learning processes as an attempt to improve civil servants' competencies. This emphasizes that education and trainings are needed to prepare employees to be capable of accomplishing jobs they are facing or will face; the development is needed to prepare employees to accomplish their future jobs.

The effectiveness of education and trainings can be attained by taking account of the systematic development process. Noe (2008: 6) proposes seven stages, namely: (1) identifying the training needs; (2) ensuring that employees have motivation and basic skills necessary from contents of training; (3) creating a learning environment appropriate with organizational conditions; (4) ensuring the availability of training participants whose competencies are to be improved; (5) developing an evaluation plan consisting of identification of training outcomes and designing an evaluation of training advantages; (6) deciding a training model based on the objectives and learning environment whether to use a traditional mode or e-learning; and (7) carrying out monitoring, supervision, and, if necessary, revision in order to attain learning, behaviors, changes, and other training objectives.

## **3. E-Learning**

E-learning (Romi SW, 2007) is: 1) a new learning method using computer network media and the internet and 2) the delivery of learning materials (contents) through electronic media so that the delivered learning materials are in the electronic (digital) form. According to Wong (2008: 147), e-learning uses computer- or website-based information and communication technology for learning.

General implementation stages of e-Learning moves from Asynchronous e-Learning that is established first to Synchronous e-Learning when the needs come. Saadé (2007) states that in reality, nowadays e-learning becomes a wide approach as a simultaneous change of the face-to-face environment ([www.jite.org/documents/vol8/p177-191/pdf](http://www.jite.org/documents/vol8/p177-191/pdf)).

According to Noe (2008: 273) a technology-based learning environment is characterized by instructors communicating to learners or participants involving or through technology infrastructure. Instructors play a role as trainers for participants and there is a communication process among participants. Experts and other sources are likely to be an environment in this learning process. The principle of a technology-based learning environment completely relies on information

technology and even the management of the participants' or learners' development employs information technology.

Individual readiness as the basis for e-learning acceptance is also supported by Rahmawati and Subekti J. (2009: 1-27). Individual factors related to one's confidence in self-competence are important when a new method is applied. Likewise, the acceptance of e-learning by students of the Faculty of Accounting of Sebelas Maret University Surakarta and the number of students with high self-efficacy has positive effects on the process of e-learning acceptance.

#### 4. Learning Management System

Today, there are many forms of information technology as a learning media such as video DICS, multimedia / hypermedia, email, and internet. In connection with the use of internet information technology in education is offered e-learning. This paper is implemented through the establishment of e-learning Learning Management System (LMS) as part of the e-learning. LMS is defined as "a software application for the administration, documentation, tracking, and reporting of training programs, classroom and online events, e-learning programs, and training content." [http://en.wikipedia.org/wiki/Learning\\_management\\_system](http://en.wikipedia.org/wiki/Learning_management_system).

A **learning management system (LMS)** is a software application for the administration, documentation, tracking, and reporting of training programs, classroom and online events, e-learning programs, and training content. A robust LMS should be able to do the following: 1) centralize and automate administration, 2) use self-service and self-guided services, 3) assemble and deliver learning content rapidly, 4) consolidate training initiatives on a scalable web-based platform, 5) support portability and standards, and 6) personalize content and enable knowledge reuse.

The characteristic of LMS include :

"(1) Manage users, roles, courses, instructors, facilities, and generate reports, (2) Course calendar, (3) Learning path, (4) Student messaging and notifications, (5) Assessment and testing handling before and after testing, (6) Display scores and transcripts, (7) Grading of coursework and roster processing, including wait listing, and (8) Web-based or blended course delivery." [http://en.wikipedia.org/wiki/Learning\\_management\\_system](http://en.wikipedia.org/wiki/Learning_management_system)

Most LMSs are web-based, built using a variety of development platforms, like Java, Microsoft .NET or PHP. They usually employ the use of a database like MySQL, Microsoft SQL Server or Oracle as back-end. Although most of the systems are commercially developed and have

commercial software licenses there are several systems that have an open source licenses.

Hence LMS as well as a schoolhouse in the form of 'virtual' which has classrooms, faculty, students, student activities, learning, and student evaluation. This model was chosen to use the LMS as part of the process of e-learning because of the characteristics of the LMS as well as the school or educational institution in the form of "virtual".

#### 5. Learning Material

Training materials are important in the implementation process of training. This paper involves the development of information technology education and training materials must also take into account the participants who will use these technologies in the acquisition of knowledge. This is in accordance with the opinion of Forsyth et al. (2004c: 41) as follows:

The most effective aspects for people involved in developing course material for use on the Internet is to resolve the relationship between the delivery aspect required for information transfer of the content and the appropriate uses of the attributes of the Internet.

Development of training materials were developed in accordance with the needs and competencies developed directly from the organization in need. Kosbab (2003: 529) supports this by stating the following "training materials are developed directly from competencies by enterprises, providers and consultants of training."

Training materials in the form of teaching materials do not cover the overall subject matter. This concept aims to improve the participant activity enrichment of knowledge not only training but also understand the material comes from experience and training. This is in accordance with the opinion Biech (2005: 99) which states as follows: *when developing the participant materials, don't try to include everything on paper. The actives you design up into the knowledge, experience, and expertise of the participants. Participants should have a place to capture ideas they may want to use after the session.*

#### 6. Discussion

Trainings for government need to be improved in terms of learning processes. This is to facilitate participants to learn repeatedly so that they can acquire the necessary competence by minimizing the training costs. This can be done because it is not necessary for the participants to leave the offices where they work and they can still attend or take the learning process autonomously. The autonomy is implemented through the e-learning-based learning process.

E-learning is supported by the electronic system and application in teaching and learning

processes (Romi W, 2007: 1) including: 1) the e-Learning infrastructure. The e-Learning infrastructure includes personal computers (PC), computer networks, the internet, and multimedia equipment. It also includes teleconference equipment when we want to provide synchronous learning services through teleconference; and 2) the e-learning system and application; the software system vitalizing conventional teaching and learning processes. Such software is called the Learning Management System (LMS). Many LMSs come from open sources so that we can use them easily to be established in our schools and universities, using model 2.0.

Then the e-learning contents consist of the contents and learning materials in the e-Learning system. They can be in the form of Multimedia-based Contents (contents in interactive multimedia) or Text-based Contents (contents in texts like those in common textbooks). In general, they can be kept in the form of the Learning Management System (LMS) so that they can be used by users anywhere and anytime.

The developed LMS can be a virtual training center in which there are a classroom, modules, and test item banks as they are commonly found in a training center. Participants and instructors have direct or indirect virtual meetings. A direct meeting refers to a process of chatting as a virtual teaching and learning process. An indirect meeting is a process in which participants meet instructors in a forum facility as a place for communication, discussion, or question and answer.

The evaluation process is also virtually conducted using the developed LMS but the measurement and evaluation are still limited to the cognitive aspect. The psychomotor aspect for a treasurer has to be assessed factually through a competence test. If participants have not attained the cognitive aspect, they can still improve their competence through the e-learning process. Further, government offices have not incurred expenses to send participants to training institutions for a competence test. Costs must efficient and learning processes must be effective in the future. This is clarified further in Figure 1.

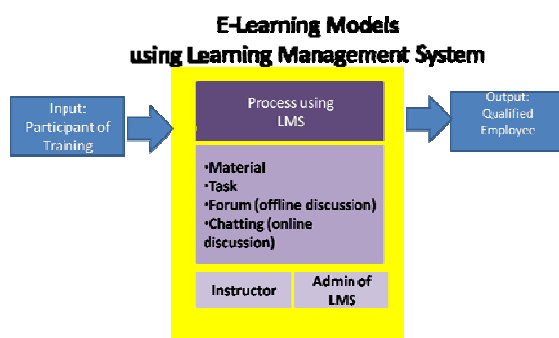


Figure 1. E-Learning Models

## 7. Closing Remarks

Cost-efficient training patterns and effective learning processes can be obtained through information technology. E-learning as part of information technology is not new in the field of education. Therefore, this needs considering in the development of training patterns for expenditure treasurers. Expenditure treasurers are prepared as functional personnel who have to satisfy the required competence standards. Such competence is acquired through a training pattern that has been implemented, namely the traditional learning pattern in the classroom. The pattern limited to space and time results in high costs.

Attempts to minimize costs without reducing the quality of the attainment of learning outcomes by training participants need to be made as a solution. The solution through e-learning is an alternative training pattern in the future. One pattern is to move the training center to a “virtual” one without reducing processes that have been implemented in learning processes. Time-efficient, cost-efficient, and effective learning processes become a solution to the training pattern for expenditure treasures. However, this will be only a dream if there is no willingness on the part of participants, instructors, and education and training institutions. All parties have to ponder whether it will be a dream or a solution; now is the time to opt.

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